R_5 consists of 2 to 4 amino acids followed by a D- or an L-amino acid residue, wherein each of the 2 to 4 amino acids is independently selected from the group consisting of alanine, serine and valine.

79. The peptide of claim 78, wherein the amino terminus and the carboxyl terminus of the peptide comprise D-amino acids.



Alessandro Sette Application No.: Not assigned Page 3

80. peptide of fewer than 30 amino acids, which peptide binds more than one DR allele, the peptide comprising a sequence of the formula

 $X_1X_2X_3X_4X_5X_6X_7X_8X_9X_{10}X_{11}X_{12}X_{13}$, wherein:

X₁ is a D-or L-amino acid;

X₂ is an amino acid selected from the group consisting of: A and K;

 X_3 is an amino acid selected from the group consisting of: (X), Y or F, wherein (X) is cyclohexylalanine;

 X_4 , X_5 and X_6 are amino acids independently selected from the group consisting of: A, I, S and V;

 X_7 is the amino acid W;

 X_8 is the amino acid T;

X₉ is the amino acid L;

 X_{10} is the amino acid K;

 X_{11} and X_{12} are amino acids independently selected from the group consisting of: A, S and V; and

X₁₃ is a D- or L-amino acid.

81. The composition of claim 80, wherein the peptide further comprises X_{14} , which is a D- or L-amino acid; and

 X_{13} is an amino acid selected from the group consisting of A, S and V and.

82. The composition of claim 81, wherein the peptide further comprises X_{15} , which is a D- or L-amino acid; and

X₁₄ is an amino acid selected from the group consisting of A, S and V.

83. The peptide of claim 80, wherein the amino terminus and the carboxyl terminus of the peptide comprise D-amino acids.